
**Decision Session – Executive Member for
Transport and Planning**

9 June 2016

Report of the Director of City and Environmental Services

**Review of York Street Lighting LED Lantern Replacement
Programme**

Summary

1. This report presents a review of how the LED lantern replacement scheme is currently performing following implementation of 6000 unit conversions in 2015, and the continued investment with 907 unit conversions planned for 2016/2017.

This report sets out the pending LED lantern conversion programmed for the summer of 2016.

Recommendations

2. The Executive Member is requested to note the findings of the report, and approve the LED lantern conversion programme for 2016/17.

Reasons:

3. The rationale is to reduce energy costs and improve the carbon footprint. Upgrading the older technology lighting with LED units will achieve energy savings on an annual basis. This should offset any increase in future energy costs. Changing our remaining street lighting stock to LED technology will achieve an annual energy saving year on year.
4. Calculations of energy savings for the projection on completion of this years programme (935 conversions) is circa £33k energy saving for a full year.

5. With the investment in the new LED technology, the street lighting will support and help to improve our environment with dark skies compliant lighting.
6. Converting the lanterns to LED has allowed the team to reduce energy costs. LED units use less wattage, which achieves a greater energy saving than the current lamps. The new units improve the environment through a reduction in light pollution and reduction in our carbon emissions. These reductions are achieved while maintaining the lighting levels we have deemed acceptable to light the highways assets.
7. We will achieve revenue saving in the form of routine faults being reduced and the requirement for routine cyclical maintenance/lamp change will be reduced. Certain maintenance will still be required for example; electrical testing will still require to be completed.

Background

8. The City of York has approximately 20,000 Street light assets (lanterns). Of this number approximately 10'000 are still to upgrade. In 2015 the team were approved to convert 6000 units replacing older less efficient discharge lighting, with LED energy efficient units. The lamp type and wattages which have been targeted were the most inefficient sources and replacement by LED will achieve the greatest savings on the energy cost. The energy saving target for this upgrade is £200K in a full year.
9. The energy submission to date would indicate we are on target to meet the reduction in energy cost.

Assessment of the Programme

Table 1: Proposed 2016/17 replacement Programme

Proposed replacement Programme	no	Date
Lantern conversion / replacement	308	Sept
Lantern conversion / replacement	308	Oct
Lantern conversion / replacement	308	Nov
Lantern conversion / replacement	13	Dec

Table 2: Proposed 2016/ 2026 replacement Programme

16000		Years											
		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Total Lanterns	20000	1	2	3	4	5	6	7	8	9	10	11	12
16000	10,000	6,000	935	935	935	935	935	935	935	935	935	935	650
2016	9,065	935											
2017	8,130	935											
2018	7,195	935											
2019	6,260	935											
2020	5,325	935											
2021	4,390	935											
2022	3,455	935											
2023	2,520	935											
2024	1,585	935											
2025	650	935											
2026	-	650											
	-												
	-												
	-												
	-												
	-												
	-												
20 years	-												

LED Replacement Programme

10. The table 2 above shows options for an accelerated LED replacement programme. The Table identifies if the street lighting team replace all existing lanterns to LED on an average of 935 lanterns per year, to completely replace all existing lamps to LED, it will take 11 years. The cost per year would be £466K. The approximate cost for the 10'000 lantern conversions would be £4.7m. The energy savings from replacing the lanterns will take approximately 9 years to mitigate the capital cost from the completion of the programme.

11. Further reports will be provided for Members as part of the annual budget setting process , reviewing options for an accelerated programme of conversions, benefiting the service provision. The report will offer a detail analysis of how the LED units are performing on energy consumption and how reductions in maintenance have been identified.

Consultation

12. The LED replacement programme has been decided through a formal process, using a Capital Resource Allocation Model (CRAM). CRAM is a tool used for allocating the council's scarce capital resources to schemes that meet corporate priorities

Options

13. The options for the Executive Member to consider in relation to the proposed scheme are as follows:

Option 1 - Approve the current scheme.

Option 2 - Amend the current scheme.

Analysis

14. Option 1 – the scheme will achieve its main objective, updating the identified assets for energy efficient lanterns. Further benefits will be realised with the introduction of the new asset, in terms of reduction in maintenance and a reduction in faults.

15. Option 2 – the scheme could be altered in-line with the suggestions in table 2, or could be accelerated further, however, this would have cost and resourcing implications. However if the programme was reduced, the drawbacks would likely result in the risks having a greater increase in lantern maintenance or lantern faults.

Council Plan Priorities

16. This report contributes to two of the three key Council Plan priorities, demonstrating that it is a **“Council that listens to residents”**. & **“A Focus on Front Line Services”**.
Summarising the feedback from residents when renewing the street lighting assets has proven to be a positive result which shows that the council is listening, and issues raised will be considered and acted upon.

17. The street lighting team will deliver the LED lantern replacement programme. This programme will support the team and achieves the Focus on front line services.

Implications

Financial/Programme Implications

18. The cost of the LED lantern replacement programme is estimated at £466K, which includes replacement costs and staff

fees. This will be accommodated within the 16/17 Capital Programme without any significant impact on other priorities.

Funding	£K	Date
Capital Resource Allocation Model (CRAM)	466	2016/2017
Total Budget	466	

19. There would be no extra cost involved in retaining the existing scheme, as recommended.
20. If the scheme were to be altered, there would be significant additional costs, for which there is currently no budget provision.

Human Resources

20. There are no Human Resources implications.

Equalities

21. There are no Equalities implications.

Legal

22. There are no Legal implications

Crime and Disorder

23. There are no Crime and Disorder implications.

Information Technology (IT)

24. There are no Information Technology implications.

Property

25. There are no Property implications.

Risk Management

Risk Category	Impact	Likelihood	Score
Organisation/Reputation	Medium (3)	Possible (3)	3x3=9

26. In compliance with the Council's risk management strategy, the main risk that has been identified in this report is the potential damage to the Council's image and reputation if the Lantern replacement / maintenance are not carried out.

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Chief Officer Responsible for the report

Neil Ferris
Director for City and Environmental Services

Report Approved



Date

27.05.16

Specialist Implications Officer(s)

There are no specialist officer implications.

Wards Affected: All Wards

All



For further information please contact the author of the report.